benzidin test Schumm detected blood diluted 1 to 200,000 times, and Ascarelli 1 to 300,000 times. With phenolphthalin even more delicate results have been obtained. Thus Deléarde and Bénoit state that they were able to detect blood at a dilution of 1 part to 1,000,000, and Kastle says that he obtained a positive result with this test at a dilution of 1 to 80,000,000. Although positive results have been obtained in high dilutions with the various tests it should be pointed out as emphasized by Kastle that testing for blood in pure aqueous solutions and testing for it in various normal and pathological secretions and excretions are quite different affairs the results of which are not comparable. For instance he has shown that urine sometimes contains substances which inhibit the test to a considerable extent.

Studying the delicacy of the phenolphthalin reaction for blood in different secretions Kastle has found that positive tests may be obtained in urine in dilutions of 26 parts in 1,000,000, an amount much smaller than could be recognized with certainty by spectroscopic or microscopic methods of examination. Blood was also demonstrated by the same test when present in the proportion of 36 to 1,000,000 of saliva, 1 to 25,000 of milk, 1 to 1750 of gastric contents, etc. In short, this observer regards the phenolphthalin test, notwithstanding the unfavorable opinion of Pozzi-Escat, as one of great practical utility. After having experimented with many varied substances he concludes that by no other methods, unless it may possibly be the spectroscopic or precipitin tests, could the different materials employed have been examined with such conclusive results in the time actually consumed in making the tests with phenolphthalin.

THE TREATMENT OF WOUNDS.

In the report of the Twenty-first Congress of French Surgeons, Dupuy, of Paris, publishes an interesting account of his experiences with the electric light in the treatment of large wound surfaces which have proven rebellious to other methods. He induces hyperemia by employing a thirty-candle-power lamp placed ten centimeters from the wound. As soon as a serous exudate appears the lamp is removed to twenty centimeters and when a thin plaque is formed the distance is increased to fifty centimeters and kept in this position for five to ten minutes. This mode of treatment has given excellent results but he emphasizes the dangers of using a higher candle-power, of prolonging the seance and maintaining the lamp too near the tissues.

The method appeals to one as being rational because, like the extensive work of Bier, it is based upon scientific principles. It is of interest to trace the important advances which have been made in the treatment of wounds but it must be admitted that many surgeons have clung to old methods years after the great thinkers have pointed out their fallacies. It takes courage and strong conviction to protest against an established custom; there are few who, though they might possess the necessary insight, would have the temerity to do so. Ambroise Pare was one of these. In his "Journeys in Diverse Places" he tells how, after the battle of Turin, 1537, when he was but twenty-seven years old, he was called upon to dress wounds on the field for the first time. He found it the custom of other surgeons to pour boiling oil upon fresh wounds and he proceeded, after some hesitation, to do likewise. Fortunately his supply of oil ran out before he had completed his dressings. "That night I could not sleep," he says, "fearing some default in not cauterizing and that I should find the wounded on whom I had not used the said oil dead of the poison of their wounds." He rose very early the next morning and found that those on whom the oil had not been used were doing well while those who had received the treatment were feverish, with great pain and swelling. "So I resolved," he adds, "never more to burn thus cruelly poor men with gunshot wounds."

The result of the use of boiling oil was tissue necrosis. The results of the employment of strong antiseptic agents on wound surfaces are the same. The difference is only one of degree. Halsted long ago made a violent protest against the use of antiseptics. He states, "We have ascertained from our experiments on dogs that irrigation with solutions of corrosive sublimate as weak as one in ten thousand produces a superficial necrosis." (Johns Hopkins Hospital Reports, Vol. II.) We know the value of his words to-day and yet it has taken nearly two decades for practitioners to appreciate them.

Even when the great Senn delivered the Lane Lectures at Cooper Medical College in 1899 he devoted much time to a discussion of various antiseptics. Textbooks still contain references to such treatment and many follow blindly these set methods of procedure. We pride ourselves on being free from empiricism and yet this routine, unthinking practice furnishes no better example. It is high time that deep cut or denuded and abraded surfaces should receive the same care and discrimination, the same thought and painstaking treatment, as now characterizes other fields of surgery.